Test plan for TRADEOXY

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**1. Overview**

This test plan covers the scope, objectives, approach, and resources required to verify the functionality, performance, security, and usability of a trading platform with scanners for stocks, crypto, and forex. The application also includes several predefined indicators and patterns, providing real-time analysis and custom indicators.

**2. Scope**

The scope of testing includes:

* **UI/UX Testing**: Verifying that all user interface elements (navigation links, buttons, search bars) function as expected and offer a seamless user experience.
* **Functional Testing**: Ensuring that all scanner functionalities (e.g., "15 min Breakout," "Bullish Candle Pattern") return accurate results and are error-free.
* **Performance Testing**: Assessing the application's load time and responsiveness, especially for high-traffic scanners and dynamic components.
* **Security Testing**: Validating data security, login/logout processes, and session management to protect sensitive user data.
* **Usability Testing**: Testing for ease of use and ensuring the layout is intuitive and accessible.

**3. Objectives**

The objectives of the test plan are:

* To validate the application’s functionality and ensure all scanners and indicators are accurate.
* To assess the performance and load times of key features and ensure they meet acceptable thresholds.
* To identify and report any security vulnerabilities, ensuring that user data is protected.
* To verify that the application is compatible across different browsers and devices.

**4. Test Approach**

**4.1 Manual Testing**

Manual testing will cover the majority of functional, UI, and usability tests. This includes verifying each scanner, indicator, and pattern for expected behavior. Security checks, such as verifying HTTPS for login, logout functionality, and user session management, will also be performed manually.

**4.2 Automation Testing**

Automated testing will be utilized for:

* **Regression Testing**: Using Selenium WebDriver to automate tests for key workflows (e.g., scanner selection, sign-in, navigation) to ensure they continue working after updates.
* **Data Validation**: Automating checks for scanner results’ accuracy over time, especially for commonly used scanners.

**4.3 Performance Testing**

Using JMeter to evaluate the application's load handling for:

* Homepage
* High-demand scanners (e.g., "15 min Breakout")
* User login/logout processes

**5. Testing Types**

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| --- | --- | --- |
| **Testing Type** | **Description** | **Tools** |
| Functional Testing | Verify scanners, patterns, indicators, login, and navigation are functioning as expected. | Manual, Selenium WebDriver |
| UI/UX Testing | Confirm intuitive and user-friendly design with accessible navigation and consistency across devices and browsers. | Manual |
| Performance Testing | Measure load time, response time, and resilience under high user load. | JMeter |

**6. Environment**

* **Test Environment**: Production-like test environment with access to all scanners and indicators.
* **Browsers**: Chrome
* **OS**: Window 11

**7. Resources**

|  |  |
| --- | --- |
| **Role** | **Responsibility** |
| QA Engineer | Execute manual tests, create test cases, and report bugs. |
| Automation Engineer | Develop and maintain automation scripts using Selenium. |
| Performance Engineer | Execute load and performance tests using JMeter. |

**8. Deliverables**

1. **Test Cases**: Documented test cases covering functional and UI.
2. **Bug Reports**: Detailed bug reports with severity, steps to reproduce, and expected vs. actual results.
3. **Performance Report**: Summary of load times, peak load resilience, and key metrics.

**9. Entry and Exit Criteria**

**Entry Criteria**

* Access to the application and all required resources.
* Test environment configured and stable.

**Exit Criteria**

* All high-severity bugs resolved.
* Functional tests pass at 95% success rate.
* Performance benchmarks met for critical features.